CHAPTER 4

PETROLEUM PIPELINE AND TERMINAL COMPANY

Section I. The Organization

MISSION AND ASSIGNMENT

The mission of the Petroleum Pipeline and Terminal Operating Company is to operate petroleum pipeline and terminal facilities for receipt, storage, issue, and distribution of bulk petroleum products in support of an independent corp or theater army area of operations. The unit is organic to an HHC, Petroleum Pipeline and Terminal Operating Battalion (TOE 10416L000), or an HHC, Petroleum Group, (TOE 10602L000). It may also be attached to a Theater Army Area Command or Corps in the absence of the above headquarters.

CAPABILITIES

The personnel strength levels prescribed in its TOE determine the company's capabilities. The petroleum pipeline company, organized under TOE 10417, has the following capabilities.

Full Strength

At full strength (TOE level 1) and operating on a 24-hour basis, this unit--

- Operates terminal facilities for storage of up to 500,000 barrels (42 gallons/barrels) of bulk petroleum depending on capacity and type of storage facilities available. A facility normally consists of two tank farms, each with a capacity of up to 250,000 barrels of bulk petroleum products, or operates a TPT, with storage capability of up to 90,000 barrels, when permanent or semipermanent facilities are not available. The TPT provides the equipment and storage capacity for off-loading tanker ships over the shore.

- Ships bulk petroleum products (about 720,000 gallons per day) through 150 kilometers (90 miles) of pipeline.

- Operates six pump stations 24 hours per day to deliver bulk product through 6- or 8-inch multiproduct coupling pipeline.

- Operates facilities for shipment of bulk products by coastal tanker, barge, rail, and tank trucks.

- Maintains a prescribed reserve of bulk petroleum products for the theater or an independent corps.

- Operates an FSSP for bulk issue operations.

- Installs and operates up to 8 kilometers (5 miles) of tactical hose line.

- Provides limited bulk fuel reduction capabilities.

- Provides food service support for assigned personnel.

- Provides support for Engineer Company, Pipeline Construction (TOE 05434L000), when assembling pipeline.

TOE Strength Levels 2 and 3

Operational capabilities are reduced to about 90 percent for level 2 and 80 percent for level 3.

Type B Organization

The capabilities of a type B organization are the same as those of a level 1 organization. There are some differences in personnel, however. A type B organization requires fewer US military personnel. Non-US personnel can fill vacancies existing in this organization. Interpreters and translators required under the type B organization will be provided from the appropriate MACOM.

REQUIRED SUPPORT

External support is required. This unit depends on

- Appropriate elements of the corps or theater army for legal, health service support, finance, and personnel and administrative services.
- Engineer fire-fighting teams-fire truck (TOE 05510LB00) for required fire-fighting support.
- Petroleum laboratory support from HHC, petroleum pipeline battalion.
- Military police security company for security in the theater area or corps.
- Engineer pipeline construction company (TOE 05343L) for pipeline construction.

MOBILITY

This unit can transport 616,700 pounds (27,176 cubic feet) of TOE equipment with organic vehicles. This unit--

- Has 321,256 pounds (19,230 cubic feet) of TOE equipment requiring transportation.
- Requires 33 percent of its TOE equipment and supplies to be transported in a single lift using its authorized organic vehicles.

ORGANIZATION

The company is organized with a company headquarters, petroleum product control section, terminal operating platoon, pipeline operations platoon, and maintenance section. The company headquarters, petroleum product control section, and maintenance section are discussed in Sections II through IV. Chapter 5 gives the details of the terminal operating platoon. Chapter 6 gives the details for the pipeline operating platoon. Figure 4-1 shows the organization of the petroleum pipeline and terminal operating company.

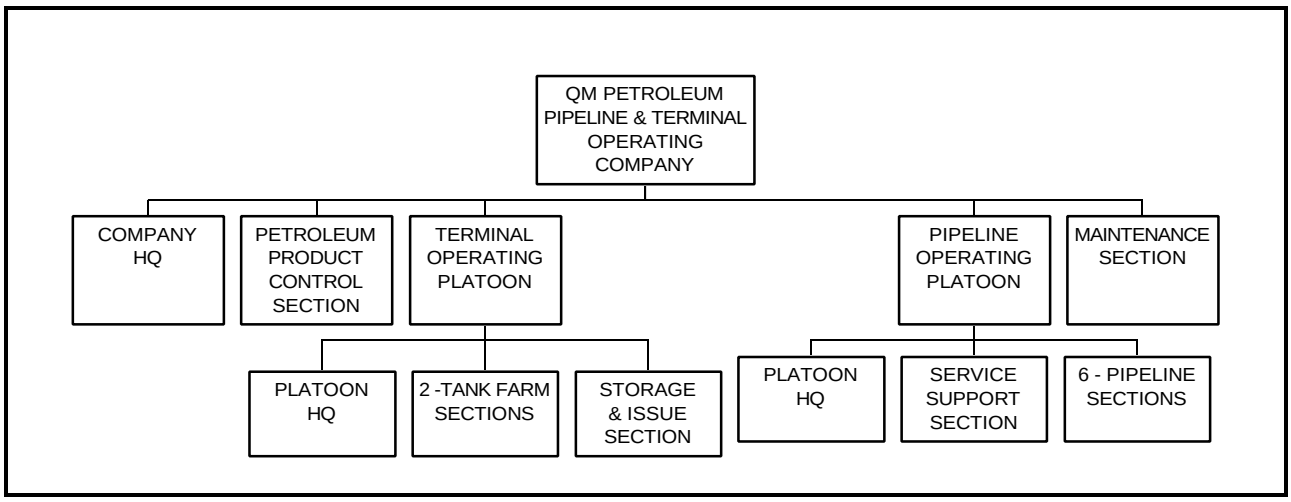

Figure 4-1. Company organization

Section II. Company Headquarters

MISSION

The primary function of the company headquarters is to provide command and control. Other functions include administration, and logistical support required to conduct unit operations.

DUTIES OF PERSONNEL

Effective operation of the headquarters requires identifying key personnel and understanding their duties and key responsibilities. Key personnel include--

Company Commander (Captain, 92F). The company commander is responsible for everything his company does or does not do, and he cannot delegate this responsibility. He can delegate authority to his subordinates and make them responsible to him. However, the company commander is responsible to his commander for everything done or not done by the company. Only he is answerable for the company. Specifically, the company commander must--

- Make sure that the company performs its mission.
- Train your soldiers.
- Prepare your soldiers for the rear battle mission. This includes rear area security and damage control.
- Maintain discipline and esprit de corps.
- Provide a program to sustain the fitness of your soldiers.
- Ensure safety and environmental compliance.
- Make sure the company functions according to command regulations and policies.
- Keep higher headquarters and your soldiers informed.
- Maintain communications and electronic security.

First Sergeant (E7, 77F5M). Assists the company commander in the supervision of company administration functions. Prepares rosters, schedules, reports, correspondence, orders, and other materials. When the company officers are not available, the first sergeant assumes most of the duties of the company commander. The unit clerk is under his direct supervision. Also, the first sergeant--

- Coordinates the activities of the company.
- Makes scheduled and unscheduled inspections; takes corrective action immediately when deficiencies are noted.
- Plans for time to listen to the troops and makes sure they feel free to discuss their problems both personal and professional.
- Ensures the company SOP includes instructions for--
  - Submitting operating reports.
  - Displacement and defense.
  - Reporting intelligence information.
  - Requesting supplies.
  - Submitting material readiness and unit status reports.
  - Submitting disciplinary actions.
  - Ensuring safety/environmental compliance.
  - Delivery of mail.
  - Recycling.

Personnel Administrative Specialist (E4, 75B10). Performs administrative and clerical duties for the company headquarters. Prepares reports including--

- Strength reports.
- Casualty reports.
- Recommendations for awards and decorations.
- Leave requests.
- Pay documents.
- Duty rosters.
- Unit mail records.
- Unit files.
- Reports on promotions.

Petroleum Light Vehicle Driver (E3, 77F10). Operates the radio in the command 1 1/4-ton truck (HMMWV), drives for the commander, and performs all operator maintenance on the 1 1/4-ton truck. The vehicle driver also can be the unit courier between the unit and the headquarters of the petroleum operating battalion.

Senior Food Operations Sergeant (E7, 92G40). Supervises cooks assigned to the company. He--

- Selects field kitchen site.
- Prepares production schedules.
- Adjusts menus.
- Prepares food ration requests.
- Conducts daily meetings.
- Inspects food kitchen personnel.
- Supervises food preparation.
- Assigns duties.
- Inspects field kitchen.
- Prepares SOP for kitchen personnel, including instruction sheet for headcounters; instructs headcounters.
- Inspects serving lines.
- Reports equipment shortages and maintains informal equipment repair logbook

NBC NCO (E6, 54B30). Serves as primary advisor to the company commander for all NBC matters. Assists the commander in planning and conducting NBC operations and advises the commander on the organization and training of the unit NBC teams. He--

- Schedules and supervises maintenance and employment of equipment.
- Computes radiation factors affecting personnel, equipment, and operations.
- Assists in preparation and analysis of NBC reports, records, maps, and sketches.
- Prepares radiological fallout and chemical and biological downwind predictions.
- Assists in analysis of chemical target vulnerability.
- Trains company personnel in protective measures to be taken during NBC attacks or operations.

Supply Sergeant (E6, 92Y30). Prepares and maintains supply records for the unit. He--

- Provides locked facilities to safeguard supplies and property stored in unit supply room and other company storage areas.
- Processes unit laundry.

- Handles issue and turn-in of property between company and personnel.
- Assists personnel with supply matters.
- Requests, receives, and issues supplies.
- Prepares adjustment documents for property lost, damaged, or destroyed.
- Supervises armorer and supply specialist.

First Cook (E5, 92G20). Supervises second shift operations of the field kitchen. He--

- Ensures that cooks follow menus.
- Inspects food storage and food preparation.
- Directs personnel in construction of grease traps, soakage pits, garbage pits, hand-washing devices, and incineration pits.
- Instructs headcounters in duties.
- Prepares the more complex food items.

Cook (E4 (2 each), 92G10; E3, 92G10). Prepares, cooks, and serves food according to recipes, cooking times, cooking temperatures, and field kitchen SOP. They--

- Cleans work area, equipment, and cooking utensils.
- Receives, inspects, and stores food items.
- Prepares assigned food items. Sets up serving lines.
- Portions and serves food on serving lines or from food containers.
- Performs preventive maintenance on kitchen equipment.

Armorer (E4, 92Y4). Repairs and performs unit maintenance (excluding operator and crew) on unit small arms; keeps records for weapons (AR 710-2 and DA Pamphlet 710-2-1); and performs duties assigned by the supply sergeant.

Supply Specialist (92Y10, E3). Assists the supply sergeant. Requests, receives, stores, and issues authorized supplies and equipment needed for the operation of the company.

EQUIPMENT

Table 4-1 lists equipment identified for the company headquarters by TOE 10417. Other equipment may be authorized by CTAs. Use CTA 50-900 for clothing and individual equipment and CTA 50-909 for field and garrison furnishings and equipment. (See equipment registers in Appendix B for equipment descriptions.) Expendable and durable supplies are listed in CTAs 8-100 and 50-970.

Table 4-1. Company headquarters TOE-prescribed equipment list for TOE 10417

ITEM	QUANTITY
Accessory outfit, gasoline, field range: accommodates 50 soldiers	1
Alarm, chemical agent automatic: portable manpack	1
Cable telephone: WD-1/TT DR-8 1/2-km	5
Charger, radiac detector: PP-1578/PD	4
Installation kit: MK-2503/VRC for AN/VRC-47/VRC-12	1
Heater, immersion, liquid fuel-fired	12
Launcher, grenade, 40-millimeter	4
Light set, general illumination: 25-outlet	1
Machine gun, 7.62-millimeter	4
Mask chemical, biological: M40	187
Mount tripod, machine gun, 7.62-millimeter	4
Pistol, caliber .45 automatic	1
Radiac meter: IM-93/UD	2
Radiac set: AN/PDR-27	1
Radiac meter: IM-174/PD	1
Radio set: AN/VRC-47	1
Range outfit, field gasoline	3
Reeling machine cable hand: RL-39	3
Rifle, 5.56-millimeter	186
Telephone set: TA-312/pt	4
Truck, utility: cargo/troop carrier, 1 1/4-ton, 4x4, with equipment (HMMWV)	1
Tool kit, carpenters:	1
Tool kit, small arms repairman:	1
Trailer, cargo: 1 1/2-ton, 2-wheel, with equipment	2
Trailer, tank, water: 400-gallon, 1 1/2-ton, with equipment	2
Truck, cargo: 2 1/2-ton, 6X6, with equipment	2
Watch wrist	19

OPERATIONS

A major function of company headquarters is to provide supervision and direction to the overall operation of the company. To do this, the commander and his staff must consider the following factors.

Site Selection

Your unit may begin its operation at beachheads or base terminals near theater ports of entry. It may be used along any 100-kilometer sector of pipeline extended as far forward in the theater as possible. The general area for your company's pipeline, pumping stations, and tank farms are selected for you when the petroleum distribution system is set up by the theater command. Tank farm sites will be located so that they will be accessible from the available transportation networks. Engineer personnel will select the actual sites within the general area assigned taking into consideration:

- Road and rail facilities. They should be adequate for transport of pipeline equipment and supplies.

- Size. Sites should be large enough for expansion of tank farm and for tanks to be placed far enough apart to reduce fire hazard.

- Distinctive landmarks. There should be no distinctive landmarks or terrain features that could provide easy identification for enemy aircraft.

- Environmental protection.

Be sure to select an alternate area in case your unit must move because of enemy action; NBC contamination; or the effect of weather on the terrain. When you select an operating site for each element, consider the volume of traffic, needed space, safety requirements, and defense.

Site Defense

You are responsible for the security and defense of your soldiers and equipment. Your unit may face attack from threat forces. Your soldiers must be able to defend themselves initially with the assets in your unit. You must develop a defense plan, assign specific duties, and ensure that your soldiers are trained to perform defense tasks. The defense plan, to include a reaction force, must be rehearsed to ensure that all site NCOs understand the concept. Rehearsals must be both planned and unplanned. You will need to develop your defense plan in conjunction with higher headquarters and adjacent units.

Rear Area Protection

The rear area is the space within a command where the majority of the combat support and CSS functions are performed. RAP includes protecting the pipeline from interruptions by enemy activity, sabotage, or natural and manmade disasters. RAP operations are secondary missions for combat service and CSS units. The headquarters charged with a RAP responsibility draws up workable plans for RAP and supervises the RAP functions. RAP is divided into two separate functions: RAS and ADC. The commander of the pipeline and terminal operating company gets RAP instructions from higher headquarters and:

- Publishes the RAP requirements in the SOP.

- Assigns RAS duties to qualified personnel.

- Sets up ADC plan designed to keep casualties and destruction as low as possible in case of enemy action or natural and manmade disaster.

- Sets up teams to aid injured in case of enemy attack.

ADMINISTRATIVE MANAGEMENT

A PAC may be activated at a higher level of command and tasked to provide formal administrative support to the company (Chapter 3). When this occurs, the commander retains responsibility for the readiness posture of his company and for ensuring that assigned soldiers are properly supported. He also retains responsibility for military justice and for informal administrative actions. See DA Pamphlet 1-2 for more information on the PAC. The following paragraphs are written from the standpoint of a company tasked to perform its own administrative functions. The commander's key assistants in providing and maintaining company administrative services are the first sergeant and company clerk. You are responsible for developing administrative management procedures. Use DA Pamphlet 1-2 and AR 340 series for guidance. Administrative management activities for which you must plan include those covered below.

Reports

A report is an account or statement describing in detail an event, situation, or similar matter, usually resulting from observation or inquiry. A number of unit reports are required.

SIDPERS. For a SIDPERS overview, see DA Pamphlet 600-8-20. SIDPERS gives you information about your people so that you can manage them individually and collectively. However, SIDPERS can work for you only if your company promptly reports personnel strength and organization change data. DA Pamphlet 600-8-1 gives detailed procedures for preparing and submitting SIDPERS input reports. Make the personnel administrative specialist accountable for prompt and accurate submission of change data, immediate resolutions of errors, and continuing maintenance of files and source data. DA Pamphlet 600-8-8 lists performance indicators and standards for evaluating the personnel administrative specialist's performance.

Conduct and efficiency ratings. Along with other data, these ratings help determine eligibility for certain personnel actions such as promotion, assignment, or award. Also, they can be used to determine the type of discharge a soldier will receive on completion of enlistment. Conduct ratings are based on demonstrated reliability, good moral influence, sobriety, and obedience. Efficiency ratings are based on job performance. Make sure all key personnel are familiar with the enlisted rating system described in AR 600-200. See AR 623-105 for guidance on rating officers. Make sure all ratings are fair and impartial.

Unit status report. The unit status report produces information to help the Army manage its resources. The payoff is military readiness. The Army wants your company to have its authorized personnel on board, its authorized equipment available in working order, and its required supplies on hand. Also, the Army wants your company to do what it is supposed to do--turn out soldiers who will assist the unit mission. See AR 220-1 for your company's reporting requirements.

Materiel condition status report. You must be constantly aware of materiel readiness status within the company. You can do this through a timely system of inspections and reports. These reports are made out by your maintenance element supervisor on DA Form 2406 following instructions in DA Pamphlet 738-750, Appendix C. You should review these reports carefully before forwarding them so that you can determine the readiness status of reportable equipment, reasons for shortcomings, and corrective action that must be taken.

Records

A record is an account in writing or similar means preserving the memory or knowledge of facts or events. A report becomes a record when it is filed or maintained in a repository indefinitely or for a specified period of time. You need an efficient and economical records management program to make sure you and your supervisory and administrative staffs have needed information. Make sure records are properly receipted for, used, stored, dispatched, and when no longer useful, destroyed. AR 340-1 governs records management activities and identifies other regulations dealing with the subject. Some of the records kept by company headquarters are discussed here.

Plans, orders, and SOP. Your plans and orders are based on those received from higher headquarters. Plans set forth a logical sequence of steps to be taken by each unit element in performance of the company's mission. Orders should fit each specific situation and not merely refer to a checklist or repeat the SOP. The company SOP is a written set of instructions which has the force of orders. The SOP sets forth routine or recurring matters. If prepared in detail and updated frequently, the SOP is an effective management and supervisory tool for clarifying duties and responsibilities and making information available to all. The purposes of an SOP are to--

- Reduce the number, length, and frequency of orders.
- Simplify the preparation and transmission of orders.
- Simplify operations.
- Relieve supervisors of the need to make repetitious decisions on routine work.
- Minimize confusion and errors.
- Provide an authoritative reference for answering questions on responsibilities and recurring matters.
- Ensure uniform practices and results.

If an SOP is to serve its purpose, the authority to grant departures from it must be restricted. However, do not make it so restrictive that it prevents subordinates from exercising judgment or initiative. An SOP may include information on one or more of the topics shown in Appendix C. Thus, your company may have one SOP that covers all details of unit operations, or it may have several SOPs (for example, kitchen SOP, unit supply SOP, safety SOP) combined to make up the company SOP. Develop an SOP that reflects your company's needs. In drawing up the SOP, use the format for a descriptive combat service support unit SOP in FM 101-5. However, do not be restricted by this format.

Qualification record. This record reflects duties performed and skills acquired by personnel. It is used to determine duty assignments and required training. Although this record may not be kept at company level, you should review it periodically. AR 600-200 has information on preparing and maintaining enlisted qualification records; AR 640-2-1 has information on officer qualification records.

Duty roster. DA Form 6 publishes duty assignments and ensures their fair distribution. The first sergeant or the personnel administrative specialist prepares and maintains this record. The first sergeant should periodically review the duty roster to make sure the personnel administrative specialist is following directions and samples in AR 220-45.

Policy file. This record is not mandatory, but it can be helpful. It is used to summarize decisions, experiences, directives from higher headquarters, and other information affecting unit activities. The policies, which may be in the form of plans, directives, or brief notes may include charts, maps, and tables.

Unit journal. Higher headquarters may require this record. If kept, it should be prepared daily. It should be an accurate, objective record of events, actions, and operations involving the company. It may include personal recollections of persons involved and information and suggestions helpful to similar units performing under similar conditions. The unit journal is, in effect, the unit history.

Environmental records. Spill reports, spill clean up, disposition of contaminated materials, inventory discrepancies and other such records must be maintained IAW federal and host nation agreements, policies, laws, and regulations.

Office Management

Office management is concerned with the routine administrative matters occurring within the company command post or orderly room. These matters include correspondence, files, publications, mail, and unit fund.

Correspondence. Usually you or your first sergeant must review each piece of correspondence. Before signing correspondence, check it for proper format, correctness, and accuracy. Train your personnel to prepare correspondence to the standards in AR 25-50. Try to handle each piece of correspondence only once.

Files. Periodically survey unit file procedures to make sure they conform to guidance in ARs 340-2 and 340-18. Proper files management involves the following:

- Are files properly identified, labeled and arranged?
- Are proper file numbers being used?
- Are correct disposition instructions on the folder labels?
- Are disposable records destroyed at the end of retention periods?
- Are applicable records transferred to a holding area or records center?

- Are file personnel trained to use the Army Functional Files System and proper filing procedures?

Publications. Publications management involves requesting and posting publications and making them available to those who need them. To determine publication needs, consult reference listings in applicable STPs and the applicable ARTEP/AMTP. Review DA Pamphlet 310-1 for technical manuals for equipment listed in the TOE. The reference list at the back of this manual identifies required publications which should be in your company library. Publications must be complete, current, and accessible to personnel who need them. Require prompt posting of changes and periodic scans of DA Pamphlet 310-1 to see if changes have been published or publications have been superseded or rescinded. See DA Pamphlet 310-13 for posting information.

Mail. The purposes of mail services are to safeguard official and personal correspondence and to deliver mail quickly and correctly to addressees or to dispose of mail that cannot be delivered. A unit mail supervisor who you appoint assists you. The mail supervisor oversees a unit mail clerk and an alternate mail clerk, both additional duties. Duties of unit mail personnel are-

- Unit Mail Supervisor. Supervises unit mail clerks. Trains mail clerks IAW DOD 4525.6-H. Makes sure mail is delivered promptly. Ensures collection hours are posted on mail boxes. Accounts for registered, insured, and certified mail. Inspects unit mail room. Reviews personnel locator directory for currency. Reviews postal records. Makes sure mail is treated properly. Reports immediately to unit commander any known or suspected cases of loss, theft, destruction, or other mistreatment of mail.

- Unit Mail Clerk. Safeguards mail until delivery or other disposition. Ensures prompt delivery of mail. Assists and advises unit personnel on postal matters. Maintains personnel locator directory. Maintains mail records IAW DOD 4525.6-H. May be held responsible for any loss brought about by improper handling of mail in their care. Appointed on DD Form 285.

- Alternate Unit Mail Clerk. Takes charge of unit mail operations in absence of regular mail clerk. Appointed on DD Form 285.

Unit Fund Management

The primary source of unit fund income is a share of the profits from activities such as post exchanges and motion picture theaters. Other sources include proceeds form sales of unserviceable fund-owned property or serviceable fund-owned property sold to other nonappropriated funds. Also, the fund may receive income from savings accounts and investments in US government securities. The unit fund is administered and supervised by a custodian (normally the commander) aided by a fund council.

Custodian. The custodian receives, safeguards, disburses, and accounts for fund property and assets. Disbursements are made by check except for petty cash. Fund records are maintained according to AR 215-5. The custodian has financial responsibility for administration of the fund. The custodian may have to reimburse the fund improper expenditures or for losses resulting from negligence or failure to comply with fund regulations.

Council. The commander appoints the council. It should consist of a custodian, as president, and at least two other unit commissioned or noncommissioned officers. The commander may appoint specialist in grade E4 and above when a higher commander approves such appointments. The council meets at least quarterly at the custodian's call. Make sure the proceedings are recorded and filed. The junior council member is usually the recorder.

Personnel Management

Personnel management involves getting things done by the soldiers. The ability to do this is a measure of the success of a commander. Listed below are helpful personnel management principles.

- Establish objectives. State in written form what you want to do. Make sure the objectives are obtainable. Make them known to your personnel in clear, realistic terms.

- Motivate your personnel. Make them want to do their best as team leaders.

- Communicate effectively. Express yourself clearly and concisely. Make sure you say what you want your personnel to hear. Be a good listener.

- Be innovative. Find new and better solutions to problems. Encourage your personnel to offer suggestions. If you use their ideas, reward and recognize them.

- Maintain cooperation. Use your skills to develop and sustain a spirit of teamwork within the unit.

- Develop your subordinates. Assess their skills and abilities and determine what training is best in their professional development. Encourage them to take advantage of opportunities for career development.

- Keep abreast of personnel management trends. Participate in personnel management training sessions.

Personnel Actions

Personnel actions are those actions that put into effect personnel management principles. The actions include assignment, promotion, and reduction of personnel and submission of recommendations for awards, decorations, and commendations.

Assignment. As a rule, assign personnel according to MOS. Put the right person in the right job. Take the time to know what each person can do. Assign worthwhile and constructive tasks. Consider rotating assignments to allow for professional development. You may wish to reassign personnel to make better use of their skills or for reasons of health, morale, or safety.

Promotion and reduction. Your authority to promote or reduce enlisted personnel is given in AR 600-200. Be careful in performing these actions. They can help or harm company morale and efficiency. Be prudent in making or recommending promotions. They should never be automatic or based on partiality. Make sure your personnel know the qualifications and requirements for the next higher grade. Encourage them to prepare for more responsible positions.

Awards, decorations, and commendations. You may recommend personnel for awards decorations, and commendations. See AR 672-5-1 for details. Submit recommendations to higher headquarters. You may also award letters of commendation to personnel for outstanding job performance. When you do, make sure copies of the letter are placed in the individuals' personnel files.

Replacements

Replacements come to your company from higher headquarters. Replacement of personnel is based on unit strength reports provided to SIDPERS element of higher headquarters. In-processing procedures can help shape new replacements' attitudes. Chapter 7 of FM 22-101 has guidance on reception and integration of new members of a unit. The adjutant (S1) at higher headquarters will normally advise you where to put replacements for their best use. On the other hand, the personal desires of replacements should be considered, when possible. You should meet all replacements as they arrive. You or the first sergeant should interview them to make sure they have the things they need and understand the company organization and mission. Replacements should be assigned sponsors to help them process in. Then the newly assigned soldiers should meet their supervisors and start their jobs.

Enemy Personnel and Materiel

Follow procedures given in FM 19-40 in dealing with captured enemy personnel. More information is in DA Pamphlet 27-1-1 and FM 27-10 which outline how the Geneva and Hague Conventions apply.

Non-US Labor

You may be able to fill vacancies with non-United States personnel. Host nation personnel may be used in any capacity except for handling remains. Refer to DA Pamphlet 690-80 and FM 41-10 for guidance on obtaining and employing non-US labor. The number of non-US personnel must be determined by higher headquarters and will depend on the capacity of available personnel, the number of shifts, and local conditions. The term "non-US labor" may include native personnel, refugees, evacuees, displaced persons, and prisoners of war. If prisoners of war are used, they may not be assigned to any dangerous or purely military activity. Training, supervision, and security need to be considered in using non-US labor.

Training. Training may be necessary before non-US labor can operate effectively. Training should be in line with standard procedures which take into consideration cultural, language, and economic differences between non-US labor and US forces.

Supervision. Normally, military personnel supervise non-US labor. In some areas, where close supervision is possible, local civilian supervisors may be used.

Security. The use of non-US labor must not endanger the security of military forces and operations. Make certain all non-US personnel have proper identification. Precautions must be taken to prevent pilferage of military goods.

MORALE SERVICES

Morale services assist you in maintaining a high level of morale in the unit. They also protect the physical and psychological health of troops.

Safety

Injuries and accidents can seriously affect the company. The result can be a drop in unit readiness. To keep this from happening, you have to come up with a safety program that works and that covers all aspects of your company's operations (DA Pamphlet 385-1). Your soldiers have to be thoroughly trained in the proper handling of material and the precautions to be taken when handling or storing dangerous items. All safety rules and practices must be followed without exception. Also, everyone should be impressed with the importance of staying alert to detect potential hazards, taking corrective action to reduce or eliminate dangers, and promptly reporting all accidents and safety hazards. Your safety program should emphasize safety requirements for all company operations. Describe the program in your safety SOP, and make sure requirements for specific operations are covered in other SOPs. Also, train your personnel in all aspects of the safety program. Make sure your solders are aware of all safety hazards involved in their work and that they practice safety precautions daily. You have to work at achieving safety. Apply the following principles of accident prevention.

Active interest. Emphasize safety at all times in all company activities. Safety programs succeed when everyone participates and keeps up an active interest. Appeal to the personal pride, and point out responsibilities each individual has in the program. Ask for and carefully consider suggestions for making operations safe. Give credit where credit is due; let the successful suggester (and the rest of the company) know an idea has been adopted. On the other hand, if a suggestion is not adopted, let the suggester know why. Your supervisors should be interested in what the accident rate does to efficiency. Supervisory interest can be maintained by providing facts and figures to show how accidents can affect company productivity and, conversely, how increased demands for productivity can increase accidents.

Fact-finding. When an accident occurs, get the facts. What happened? How did it happen? Was anyone hurt? Was anything damaged? When and where did the accident take place? How serious was it? The answers to these questions should give you the answer to the most important question of all: Why did the accident happen? Your fact-finding should focus on any act connected with the accident and why the act took place. Also, check the nature of any mechanical failure or physical hazard. If a tool or piece of equipment contributed to the accident, find out if an improper item was being used, if it was being used properly, and if it was defective.

Corrective action. Use the facts you gather on safety, accidents within your unit, injuries to personnel, and damage to equipment to come up with a workable pattern of corrective action. Go beyond the basic requirement to report accidents. Require that near accidents be reported, with all available information, so that steps can be taken to eliminate hazards, unsafe procedures, or unsafe conditions. In the same way, anything that constitutes a threat to safety should be reported so that corrective action can be taken. If you have soldiers who are repeatedly accident victims, consider placing them in assignments in which they are less likely to endanger themselves and others.

Field Sanitation

Disease can have a significant impact on your unit's ability to perform its mission. Proper sanitation practices are crucial in reducing this threat. Your responsibility for sanitation includes training your soldiers in preventive medicine, providing necessary sanitation equipment and supplies, and setting up and enforcing sanitation procedures. AR 40-5 directs that you set up and train a unit field sanitation team. Use TC 8-3 to train the team. After the team is operational, supervise field sanitation operations. Ensure proper sanitation procedures are followed IAW federal, state, local and host nation environmental/safety laws, regulations, and policies. For more information on field sanitation operations, see FM 21-10 and AR 40-5.

Health Services

Coordinate with higher headquarters for health service support and make sure it is available during operations. Plan for emergency medical treatment to be available during day-to-day operations. Your responsibility also includes providing for the training of all unit members in self-aid/buddy-aid (first aid) procedures. To survive on the integrated battlefield, each soldier must be proficient in first aid. See FM 21-11 for more information on first aid procedures. When a soldier goes on sick call, DD Form 689 serves as a link between you and the medical or dental officer. Normally, the first sergeant or personnel administrative sergeant prepares the form for the sick or injured person who takes it to the medical facility. You are informed of the disposition of the individual's case when medical personnel return the sick slip to you. In emergencies, the sick slip may be initiated at the medical facility. The sick slip is not a permanent record. After it has served its purpose, it may be destroyed, except when it must be forwarded to an officer exercising special court martial jurisdiction in a line-of-duty investigation. Prepare sick slips according to AR 600-6. During maneuvers or in theater of war operations, DD Form 689 is not used.

Shower, Laundry, and Clothing Repair

In the field, your troops will require periodic shower service and exchange of clothing. Coordinate with higher headquarters to make certain that your company is scheduled for service by the SLCR section operating in your area. The SLCR section may also provide delousing operations supervised by medical personnel.

Mortuary Affairs

The company is responsible for searching for, recovering, and evacuating remains. Search involves going into the casualty area and collecting remains. Recovery involves identifying remains, recording all equipment and personal effects found with remains, and sketching the recovery site. Evacuation is the moving remains from the recovery site to the nearest mortuary affairs collection point. Under some circumstances, the unit may have to bury remains. Emergency burial of remains should only be performed when the tactical situation does not allow evacuation or when remains are NBC-contaminated. If remains are contaminated, be sure to mark the burial site with the correct NBC marker. Make certain you, your officers, and NCOs are familiar with the information in

JTTP 4-06. Deceased personnel may be a result of accidents or combat; therefore, you must know which reports are required and the reporting channels for each.

Personal Financial Management

You should concern yourself with the finances of your soldiers and their families. Good money management can contribute to individual and unit morale. Designate individuals within the company as financial counselors and set aside time for them to counsel troops. Make sure each unit member has a copy of TC 21-7. Use the practical exercises in Chapter 7 of the training circular to set up personal financial management training.

Environmental Compliance

Environmental laws, regulations, and policies, have been devised with protection of human health as a primary consideration. Complying with these requirements unconditionally is the best way to ensure that a given area will remain habitable, indefinitely, for conducting Army operations. However, it is understood that the level of environmental protection will vary, as during wartime or battlefield conditions, depending on available resources. Nonetheless, it is Army policy, per AR 200-1 and JTTP 4-04, that it will comply with all federal, state, local, and host nation environmental laws, regulations, and policies. Fostering a proper environmental ethic and ensuring environmental compliance through proper practices and procedures within the company, is the surest way to protect human health and the environment. Also, this practice will keep personnel from facing unnecessary legal burdens.

TRAINING

Make sure training is available and effective for all administrative and morale services. See Chapter 9 for information on managing training and securing training materials

UNIT SUPPLY

The unit supply element supports the company with certain supplies and TOE equipment. You are responsible to the commander for internal supply operations. The most important publications to use are in the Unit Supply Update. You also need your company's MTOE. Make sure you and your soldiers understand the mission of supported units.

Required Information

To manage unit supply operations, you have to know the--

- Requirements and authorization of your company.
- Desires of the commander regarding unit supply.
- Size and physical characteristics of the unit supply element.
- Location and layout of the element.
- Type and amount of support needed to run an element.
- Number, type, and particular needs of soldiers in the company.
- Impact of operations on internal supply operations.
- Request and issue cycle of higher headquarters.
- Location of each supply support activity furnishing support.

Unit Supply SOP

Develop a unit supply SOP. It may be a separate SOP or part of the unit SOP.

- Responsibilities for company supply operations (Chapter 6).
- Hours of operation of the supply element.
- Procedures for controlling durable items.
- Measures for controlling issued property.
- Types of records, reports, and forms required.
- Detailed procedures for requesting, receiving, storing, inventorying, issuing, and turning in supplies and equipment.
- Procedures for adjusting records for lost, damaged, or destroyed items.
- Procedures for safekeeping property of absentees.
- Guidelines and directions for maintaining equipment and supplies.
- Procedures for laundry service.
- Safety, fire and emergency procedures.
- Information on supply training.
- Table of measurement equivalents (FM 10-13).
- Procedures for operating in an NBC environment.

Responsibility

Property responsibility is the obligation of a person to ensure that government property entrusted to his possession, command, or supervision is used properly and cared for and that proper custody and safekeeping are provided. Although you run the unit supply element, all soldiers have certain responsibilities for property. These include supervisory and personal responsibility according to AR 735-5.

Accountability

Accountability is the obligation of a person to keep an accurate record of property. It includes maintaining formal records that contain item identification data, debits, credits, available balances on hand or in use, and locations of property. The property book officer issues property to the commander on hand receipts. You assist the commander, who must--

- Ensure that all property is posted correctly to property records.
- Know what property is on hand through physical inventories.
- Take action to resolve shortages or overages.

Operations

As supply NCO, you request, receive, store, protect, inventory, issue, and turn in supplies. You may also have to obtain laundry support for the company.

Requests. See Table 4-2 for authorization documents which list items you may request. Have a consolidated company request prepared, and send it to the battalion S4. See Table 3-3 for request and turn-in forms. Check the request for accuracy and completeness before it leaves the company. Initiate follow-up action if supplies are not received on schedule, and periodically review the current need for requested supplies. See DA Pamphlet 710-2-1, Chapter 2, for details.

Table 4-2. Authorization documents for property

TYPE OF PROPERTY	AUTHORIZATION DOCUMENT
Organization Property	MTOE CTA 50-900, Section II CTA 50-909, Appendix C TDA Joint Table of Allowance AR 840-10
Installation Property	CTA 50-909
Expendable Supplies Repair Parts	Technical manuals containing repair parts and special tool lists
Other Expendables	CTA 8-100 (Medical) CTA 50-970 (all except medical, ammunition, repair parts, and heraldic items)
Personal Clothing	AR 385-32 AR 700 84 CTA 50-900

Receipts. The commander uses DA Form 1687 to designate those authorized to sign for supplies. This form is sent to the support activity. The commander remains fully responsible for the supplies. See DA Pamphlet 710-2-1, Chapter 2. When you receive, take these steps:

- Check quantities and NSNs.

- Check the serial numbers when you receive items with serial numbers. Check each item's serial number with the one recorded on the receipt document. If there is no serial number listed on the receipt document, enter it.

- Inventory components of end items against applicable technical manuals or supply catalogs to make sure all components have been received.

- Report discrepancies to the supply support activity according to AR 735-5.

Property book items. Issues of property book items must be recorded on DA Forms 2062, 3161, or 3749. The hand receipt holder must sign the form.

Petroleum reports. DA Form 3643 and DA Form 3644 are used to report issues of petroleum for operating the pumping station, FSSP, FARE, and related equipment. These forms are completed and submitted according to the SOP and DA Pamphlet 710-2-2.

Storage and Protection.

The unit supply may be required to store and protect certain items. See AR 735-5.

Ammunition. Operational situations may prevent storage of ammunition in magazines or special storage rooms. If so, the unit commander may be authorized to store the basic load of ammunition on vehicles or trailers or in other ways demanded by the situation. See AR 190-11.

Rations. Store the basic load of rations on dunnage under tarpaulins. This prevents damage from moisture and rodents.

Lubricants and oils. Store containers on dunnage or pallets. See DA Pamphlet 746-1 for details on pallets. Inspect all cans for leaks before storing them. Store empty containers separately. Make sure the proper type extinguishers are available and that sand barrels are nearby.

Hazardous wastes. Hazardous wastes may be generated by maintenance activities, POL spills, spills or leaks within supply's hazardous materials storage areas, as well as other sources. They are to be stored in properly segregated, hazardous wastes accumulation site areas. They must be stored in containers in good condition, with proper signs, safety equipment, and compliance with labeling, dating, accumulation time, and other requirements, IAW the local environmental protection program.

Weapons. The armorer controls and protects stored weapons. Make sure he performs these functions according to FM 10-14, Chapter 7.

Issue

Nonexpendable items. Usually nonexpendable items received at the supply room are for issue to the user. The items must be put up on the hand receipts before they are issued.

Expendable items. These items are dropped from accountability; but for good supply economy, every effort must be made to control them. Simple records and control sheets should be set up for expendable items issued from the supply room and repair parts issued from the maintenance section by the PLL clerk.

NBC protective items. Store replacement stocks of individual MOPP gear so that they are ready for issue in the event of NBC warfare. Be prepared to replace defective items or items that are incorrectly sized. You should have at least one extra overgarment for each soldier in your company.

FIELD KITCHEN

The Army field feeding system calls for two hot meals and one MRE as the basic combat ration. A food service team with its food service equipment provides the T-ration meals from unitized modules. The basic equipment for the field kitchen is either the mobile kitchen trailer or the kitchen, company level field feeding. The trailer-mounted field kitchen (MKT-75, MKT-75A, or MKT-82) is a collection of food preparation and serving equipment mounted on a 1 1/2-ton trailer. The prime movers for the MKT are the 2 1/2-ton or 5-ton medium cargo trucks. See FM 10-23 for more information on the MKT.

Responsibilities

As food operation sergeant (92G), you are responsible for field kitchen operations. Use the kitchen SOP and production schedule to provide written instructions. They detail on a day-to-day and meal-by-meal basis such matters as responsibilities, work procedures, standards, and acceptable methods. To manage field kitchen operations, you must know the following:

- Where the field kitchen is to be set up.
- Location and strength of supported soldiers.
- Location of transfer points, Class I supply points, and water points.
- Location of Class III supply points for refueling kitchen vehicles and securing fuel for kitchen equipment.
- Ration issue frequency and turnaround time for obtaining rations and water.
- Time required to reach and serve soldiers operating at remote locations. Food in insulated containers will hold serving temperature for up to four hours.
- Designated ration cycle.
- Location of garbage collection points.

SOP for Field Kitchen Operations

An SOP will ensure that all field kitchen personnel know what is expected of them. The food operation sergeant coordinates the pickup days and time for ration and water with the supply activity. The SOP for operation of the field kitchen should include the following:

- Responsibilities for field kitchen operations.
- Schedule for serving meals.
- Sanitation requirements.
- Safety precautions.
- Information on care and operation of equipment.
- Records and reports required.
- Procedures for delivery of meals to those who cannot come to the field kitchen.
- Procedures for pickup of rations and water.
- Information on how to store rations.
- Information on training programs.
- Measurement equivalents.
- Ration forecasting and accountability, meal card control, and cash control procedures.
- Preparation and serving of food and water in an NBC environment.

Operations

Set up a system for the routine operation of the feeding site. Check with the S1 section or have the first sergeant or unit clerk report any changes in troop strength. These changes will affect rations delivered. Inform the field kitchen of any operational changes and the location of soldiers. If possible, make this part of your SOP. Check them for signs of illness or infection. Refer those who show such signs to a medical facility for evaluation. See TB MED 530 for more guidance. As a rule, the following assumptions apply to your operation:

- Although food can be prepared in one central location, rather than food service soldiers, using unit soldiers will pick up, deliver, and serve prepared food at the unit location. They will return insulated food containers to the kitchen site.

- T-rations will be issued in preconfigured, packaged meals, according to the approved menu.

- Each T-ration module will contain a different meal, and each meal will have a unique stock number.

- MREs will be used when T-rations cannot be prepared.

- When rations have not been unitized, units will order rations by giving the number of meals required.

- Cooking will be curtailed during NBC operations.

These assumptions apply to the following specific operations:

- Site selection. The food operation sergeant may assist the company commander in selecting the site for a field kitchen. The area selected should be one where food can be prepared efficiently. The layout must permit a smooth flow of traffic through the serving line. FM 10-23 can be used as a guide in planning the site. Some of the items to be considered when selecting the site are:

  - Good access roads.
  - High, dry ground with good drainage.
  - Sandy loam or gravel.
  - Availability of water approved by medical activity.
  - Accessibility to troops to be fed.

- Establishment of field kitchen. After the site is selected, the food operation sergeant is ready to supervise the setup of the field kitchen using FM 10-23. The cooks set up the kitchen tent, serving line, and dining and messkit laundry areas. FM 10-23 and the equipment TMs will explain how to set up and operate the equipment and give dishwashing procedures and a checklist that can be used for inspections.

- Preparation of food. The food operation sergeant is responsible for the preparation of food for the unit. He cannot be present for the entire 24-hour-a-day operation; therefore, he must:

  - Prepare an SOP to cover the procedures.
  - Keep his own schedule flexible so he can be present at different times during the food preparation and serving operations.
  - Make sure that the communication lines are open and the cooks feel free to come to him for advice or help.
  - Issue concise oral or written instructions.

- Control of quality. The food operation sergeant must check constantly to ensure that the food being served is up to health standards. Food must be prepared under sanitary conditions and served within the prescribed time to be free of microorganisms that cause food spoilage and illness.

- Tools for controlling preparation of food.

  - DA Form 3034 is required in training situations and can be used to give instructions to cooks; get data on number of meals prepared, number drawn, overages and shortages, and number of persons fed; assign duties; and record leftovers.

  - The daily cook's meeting allows the food operation sergeant to distribute workload; take care of morale and discipline problems; determine training needs; and brief the incoming shift on day's requirements.
  - A checklist will help when the food operation sergeant makes an inspection to monitor preparation and serving of meals; check rations in storage; and determine that sanitary measures are used.

- Remote site feeding. Remote site feeding is feeding soldiers deployed more than walking distance from the food preparation site. It may be done by a variety of methods. Battalions may send hot meals forward to remote units using insulated food containers. When this is not feasible, the battalion may attach a KCLFF or MKT with cooks to the remote unit for preparation of hot meals. Depending on its strength, length of mission, and other tactical and logistical considerations, the remote unit may be administratively attached for rations to the nearest unit with a ration preparation capability.

- Records And Reports. Higher headquarters will determine record keeping requirements under field conditions. You may find it helpful to keep an informal equipment logbook. Keep notes on maintenance services,

repairs, and replacement of parts. The notes will help you develop a planning replacement program. They will also help you spot careless use of equipment or poor operator maintenance.

Section III. Petroleum Products Control Section

MISSION

The mission of the petroleum products control section is to receive operating instructions from the system's dispatcher/scheduler or higher headquarters. These instructions are on the time receipt, type, and quantity of bulk petroleum products received in the tank farms. The section performs supply control and accounting functions for bulk petroleum products received, stored, and issued by the company. It monitors bulk petroleum requests from operating platoons. The section then consolidates and forwards appropriate reports to higher headquarters.

PERSONNEL

Effective operation of the petroleum products control section requires identifying key personnel and understanding their duties and responsibilities. Key personnel include those listed below.

- Petroleum Operations Officer (Lieutenant, 92F). Supervises the section. Controls the receipt, transfer, and issue of petroleum products. Prepares schedules for the entire distribution system. These schedules include the time, type, and quantity of product to be transferred or issued; flow rates; and operating pressures. Is highly mobile in the command and control of the section and performs liaison with the pipeline pump stations. Ensures compliance with federal, state, local, and host nation environmental laws, regulations, and policies. Sets the example for the environmental ethic within the unit. Ensures the adequacy of the environmental compliance program, including the local SPCC plan, with its specific requirements for reporting and clean up.

- Petroleum Operations Sergeant (E7, 77F40). Assists the petroleum officer. Coordinates and supervises petroleum testing and wholesale and retail storage and distribution operations by pipeline, air, rail, highway, water, and hose line. Consolidates reports being kept and sent to higher headquarters.

- Petroleum Dispatch Sergeant (E6 (3 each), 77F30). Monitors the movement of product through the pipeline. Coordinates deliveries with customers, prepare dispatch records and control orders for incoming fuel. Coordinates the daily pumping schedules and orders with pump stations.

- Petroleum Inventory Control Specialist (E5 (2 each), 77F20; E4 (2 each), 77F10). Receives and consolidates the stock status reports received from the elements of the terminal platoon and then forward the report to higher headquarters. Also maintains inventory control and location records of bulk petroleum products; prepares and edits supply requisitions; processes requests and receipt documents; and prepares and maintains account records. The E4s also serve as light vehicle operators.

- Movement Specialist (E4 (2 each), E5 (2 each) 88N10). Notifies transportation agencies of type and quantity of product to be moved. Coordinate with operation personnel to ensure prompt loading. Also prepares and processes transportation documents for movement.

- Senior Radio Operator-Maintainer (E5, 31C20). Supervises and performs authorized maintenance on communications equipment. Directs the installation of radios and antennas. Also recognizes and employs electronic counter-measures.

- Radio Operator-Maintainer (E4 (2 each) 31C19; E3 (2 each), 31C10). Installs, operates, and performs unit level maintenance on single channel radio, radio teletypewriter, single channel vehicular mounted satellite terminals, and COMSEC equipment.

- Signal Support Systems Maintainer (E4, 31U10). Installs and troubleshoots signal support equipment and terminal devices. Provides technical assistance and training for user operated automation and communication equipment.

- Forward Support Specialist (E4, 31U10). Installs, maintains, and operates the unit's organic wire net on a 24-hour basis. Operates switchboard.

- Administrative Clerk (E3, 71L10). Prepares and types operational reports to be forwarded to higher headquarters. Operates and performs operator maintenance on office machines; files regulations and correspondence; performs messenger service; and distributes incoming and outgoing requisitions.

A more detailed description on the duties of the petroleum products control section is discussed in section operations later in this section.

EQUIPMENT

TOE 10417 prescribes the equipment for the petroleum products control section. See Table 4-3 for a list of this equipment.

Table 4-3. TOE equipment list for the petroleum products control section

ITEM	QUANTITY
Alarm chemical agent automatic: Portable manpack	1
Antenna: RC-292	1
Axle cable reel: RL-27	1
Cable telephone: WD-1/TT DR-8 1/2-km	6
Cable telephone: WD-1/TT RL-159/U 2-km	1
Duplicating machine stencil process	1
Facsimile set: AN/TXC-1	1
Generator set diesel engine: 5-kw, 60-hz, 1-3 ph, AC 120/208, 120/240-v	1
Inst kit: MK-2503/VRC for AN/VRC-47/VRC-12	1
Inst kit: MK-1429/GRC-106A for GRC-106A	1
Light set general illumination: 25-outlet	1
Multimeter digital: AN/PSM-45	1
Power supply: PP-4763/GRC	1
Power supply: PP-6224/U1	1
Radio set: AN/GRC-106	1
Radio set: AN/VRC-47	1
Radio set control group: AN/GRA-39	2
Receiver-transmitter control group: AN/GRA-6	1
Reeling machine cable hand: RL-31	1
Reeling machine cable hand: RL-39	3
Radio test set: AN/PRM-34	1
Tone signaling adapter: TA-977/PT	1
Truck utility: cargo/troop carrier 1 1/4-ton, 4X4, with equipment (HMMWV)	1
Splicing kit telephone cable: MK-356/G	1
Switchboard telephone manual: SB-22/PT	1
Telephone set: TA-312/PT	2
Tool kit electrical equipment: TK-101/GSQ	1

OPERATIONS

The petroleum officer is in charge of this section and is responsible for the coordination of the entire operation. He must set up procedures and then see that each element in the pipeline company is doing its part. The following methods should ensure cooperation of the pipeline personnel and help to coordinate the operation:

- Train the personnel to work as a team.
- Issue clear, concise oral instructions and then check to see that they are executed.
- Keep the SOPs, directives, reference publications, and other written instructions up to date and be sure they are followed.
- Reward good work with praise; take corrective action for inadequate performance.
- Listen to subordinates; sound ideas often originate at the lower level.
- Delegate responsibility; too much supervision stifles initiative.
- Keep the personnel informed of changes that affect the pipeline operations.
- Check the hourly pumping delivery reports for indications of trouble areas. Be on the lookout for friction between various sections.

Layout Plan

The layout plan that is developed will depend on terrain in the area. The site for the petroleum products control section should be central to the overall company mission area. It should have natural cover and concealment, if possible.

Testing and Preparing a New System

After the engineer unit has finished the construction of the pipeline, the company commander or his representative (usually the petroleum officer) makes an inspection with the representative from the engineer unit. In testing long or short sections of the pipeline, use the procedures given in FM 5-482.

Communicating with members of inspection team. There must be reliable communications between operators at each end of the test section and crews examining the pipeline. Any or all of the equipment listed below may be used:

- Radio or telephone.
- Short range hand radio sets between the crews.
- Vehicle-mounted radios for contact with the pumping stations.

Checking the line and fixing leaks. Leaks can be easily seen if couplings and fittings are well exposed. Eliminate slight leaks by shaking the joint. Place a pick handle, crowbar, or similar lever under coupling and lifting the coupling several times. (This should set the seal.)

NOTE
If small leaks cannot be corrected by shaking the joint or by tightening the coupling, mark the coupling as defective.

Shut down the pumping station if a large leak occurs. Temporarily install overleak clamp and resume testing. In case of a POL spill or leak, an environmental cleanup or restoration must be completed. Spill reporting requirements must also be met. For further information, refer to the local SPCC plan and consult with the local environmental officer through the chain of command. (See Appendix A).

- Purging the line. If water was used to test the line, the line must be purged with fuel. If water is scarce, divert water into a storage tank or temporary impounding basin if the next section is not ready.

- Making repairs. Required repairs are made before the line is packed.

- Preparing reports. Submit data according to SOP on the following:

  - Section tested.
  - Number of miles tested.
  - Test pressure.
  - Test method.
  - Duration of test.
  - Approximate number of leaks per day.

Operational Control of the Pipeline and Terminal System

The petroleum officer is supervisor of the control section. He is responsible for a smooth running operation. A great deal of his time will be spent in monitoring the work, coordinating with higher headquarters, and making sure required reports are accurate and submitted on time. Therefore, he should be sure there is a SOP and that it is up to date at all times.

Company is operating with a petroleum operating battalion. When the company is part of the battalion operation, he will receive from higher headquarters pumping schedules for transfer, storage, and delivery. Personnel under his supervision make the hourly pumping and delivery report to the chief dispatcher of the petroleum operating battalion. Give the following information:

- Number of barrels pumped from storage location.
- Number of barrels received at each storage location.
- Cumulative barrels corrected to 60°F (16°C).
- Suction and discharge pressures.
- Revolutions per minute for operating pumps.
- Batch changes and interface cuts.
- Rates of flow.

Also, the following should be reported immediately to the chief dispatcher at the petroleum operating battalion:

- Line breaks.
- Leakage/spills.
- Fire.
- Suction or discharge loss or buildup of pressures.
- Other interruptions.

Company is operating independently. The petroleum officer of a company operating independently (not under the battalion petroleum activity) is responsible for the receipt, transfer, and issue of petroleum products. He should:

- Prepare schedules for the entire distribution system. These schedules include the time, type, and quantity of product to be received, transferred, or issued; flow rates; and operating pressures.

- Prepare order showing operations in chronological sequence for each element. The orders will show batch numbers; specific amounts of product by type; interface cuts; line temperature; suction pressure; and discharge pressure.

- Issue dispatching instructions to all elements of the distribution system.

- Monitor the flow of product through the system to prevent commingling of product; ensure compliance with operation orders; and detect line breaks, leakage, and other problem areas.

Establishment and Maintenance of Stock Accounting Records

Stock accounting records are prepared on DA Form 1296 and maintained as given in DA Pamphlet 710-2-2. Other accounting forms may be used when prescribed by the SOP. One record is required for each type of product. Petroleum inventory control specialists periodically check the records for accuracy and completeness and post the following information to the records:

- Receipts.
- Issue from the service station-type operations on DA Form 3643. See DA Pamphlet 710-2-2.
- Issues to tank trucks, tankers, barges, and railcars on DD Forms 250, 250-1, 1149, and 1348-1 (Chapter 8**)**, and other issues on DA Form 2765.
- Monthly inventories as required in DA Pamphlet 710-2-2. Use FM 10-67-1.
- Losses covered by DA Forms 4702-R or 4697 as outlined in ARs 710-2 and 735-5.

Coordination of Transportation Requirements for Movement of Bulk Fuels

When orders are received from higher headquarters that bulk fuels are being shipped to a company that is operating independently, the petroleum officer:

- Checks with the command transportation office for mode of transportation by which the product will be shipped (railcar, tanker, or other means).
- Requests transportation from the command transportation office if the product must be picked up at a distribution point.
- Issues orders to the storage and issue section or tank farm section listing the type of product, quantity, mode of transportation, and other information the section chief will need to plan the storage.
- Reviews the plans made by the storage and issue section or tank farm section chief and gives any assistance necessary.

The movements specialist:

- Notifies transportation agencies of type and quantity of product to be moved.
- Coordinates with operations personnel to ensure prompt loading.
- Prepares and processes transportation documents for movements.
- Set up controls to verify that security measures are being taken.

Coordination of Inventories

Inventories are taken of the fuel at the tank farms, storage and issue section, and pumping stations according to DA Pamphlet710-2-2 and DOD 4140.25M. The petroleum officer is responsible for scheduling the actual

inventories, consolidating the results, and submitting the required reports. He should prepare a SOP so all sections can conduct inventories according to the published schedule. The SOP should contain the following requirements:

- Daily status reports. Record receipts and issues daily.
- Bulk fuel. Take inventory monthly. Use MBPAS.
- All other items. Take inventory annually in CONUS, semiannually in overseas areas.
- Monthly loss. Report loss allowable under AR 710-2 and DA Pamphlet710-2-2 and on DA Form 4702-R. Report loss above maximum allowable loss on DA Form 4697.
- Issues. Know procedures for emergency issues while inventory is being conducted.

The petroleum inventory control specialist must be trained to post inventories to the stock record account and to prepare the required adjustments.

Establishment and Supervision of the Petroleum Products Quality Surveillance (STANAG 3149)

Quality surveillance is all the measures taken to ensure that petroleum products are of the required quality. Quality surveillance includes:

- Watching over and caring for products during storage and handling operations.
- Adherence to handling methods.
- Testing of products.

The product in this company is actually tested at the terminal operating platoon by the petroleum laboratory specialist. However, the pumping orders and control of the operations of the company are responsibilities of the petroleum officer. He must set up SOPs, directives, training schedules, and other guidelines to ensure that the petroleum product is kept as close as possible to the original quality. The following is a list of topics that need to be in the SOP and the publications where information on these topics can be found:

- Sampling--MIL-STD-457, ATMS, FTMS, MIL-HDBK-200 (latest edition), and FM 10-67-1.
- Testing-- MIL-HDBK-200 (latest edition), ATSM, FTMS, and FMs 10-67-1 and 10-67-2.
- Storage-- MIL-HDBK-200 (latest edition).
- Packaging and marking--MIL-STD-290 and MIL-HDBK-200 (latest edition).
- Control of product in pipeline--FM 10-18 and MIL-STD-101A.
- Reports and records--DA Pamphlet 710-2-2.
- Safety Precautions--FM 10-67-1.
- Clean tanks--MIL-STD-457 and FM 10-67-1.

Inspections. One way to be aware of the conditions that affect petroleum products is through scheduled and unscheduled visits to the operating sections. A simple checklist will be a help when inspections are made. The checklist should include procedures for:

- Security against pilferage.
- Fire protection.
- Cleaning of test equipment, work areas, and sandtraps.
- Preventing and fixing leaks.
- Spill prevention/cleanup.
- Corrosion prevention.
- Enforcement of "NO SMOKING" and safety rules.
- Use of safety equipment.

- EPA compliance.
- Completing and maintaining records.

Records and reports**.** The four pumping stations, the FSSP, the FARE, and various other activities in the company submit records and reports. The reports contain information that will help the petroleum officer to do his quality surveillance tasks. Data from the reports can point out:

- Need to change scheduling of product flow.
- Causes of accidents.
- Need for additional training.
- Personnel problems.
- Slowdowns because of repairs or need for replacement equipment.
- Future needs for personnel, equipment, and new plans.
- Need for help from a Petroleum Technical Assistance Team (AR 710-2).

Dispatching

Dispatching is the regulation of station pumping and line pressures to control the movement of products through the pipeline. Effective dispatching is a matter of precision and timing. The petroleum officer acts as the chief dispatcher for the company. The operations sergeant acts as the chief petroleum dispatch sergeant. They plan and coordinate the preparation of schedules and dispatching instructions. Three petroleum dispatch sergeants are assigned to this company (one is assigned to each shift).

Chief Petroleum Dispatch Sergeant**.** The chief dispatch sergeant uses FM 10-67-1 as an aid in carrying out his duties. He must coordinate the preparation of the monthly schedules; relay daily pumping orders to dispatchers; keep records of hourly reports from the pump stations, tank farms, and other activities; and report daily information to higher headquarters.

Petroleum Dispatch Sergeants. These sergeants are responsible for reporting for duty early enough to be briefed for shift change; monitoring movements of product from adjoining company, if required; coordinating deliveries with customers served by pipeline; ensuring that radio communications are used when teletypewriter and telephone circuits are out of order; preparing dispatching records and controls; making graphic progress charts of stream tapes as visual aids to dispatching (FM 10-67-1); and preparing tabulation of displacement, if visual means are not used, as outlined in FM 10-67-1.

Scheduling

Pipeline scheduling is the basic plan that governs the movement of products throughout the system. Usually, a pipeline schedule covers one month's operations and shows the pumping sequence, the volume, and the product to be delivered by the pipeline each day. Scheduling personnel and their duties are as follows:

Chief Petroleum Dispatch Sergeant. Determines when specific products will be needed, where the products will be needed, the amount of storage available, and the length of time it will take for the product to reach its destination. Make sure consumption graphs showing projected consumption and deliveries are made. He uses his knowledge of daily requirements, quantity authorized to be on hand, and available space along the line for storage when he prepares these graphs (FM 10-67-1). Supervise the petroleum dispatch sergeants in the preparation of consumption graphs, monthly pipeline schedules, and daily pumping schedules and orders. Makes sure a batch number is assigned when a batch of a product is put into the line. When a batch is pulled into an intermediate terminal, it loses its numbers. It is given a new batch number when it is taken out and moved farther up the line.

Petroleum Dispatch Sergeants. Under the supervision of the chief dispatch sergeant, the petroleum dispatch sergeants prepare the following:

- Consumption graph**.** A consumption graph (Figure 4-2, page 4-28) is set up to show the total barrels of a given product for each terminal or storage point. Each terminal should have some sort of consumption chart for consumers who use large quantities of any one product. Consumption graphs will allow petroleum dispatch sergeants to visualize present and future stocks and storage positions. The graphs will also give data for determining trends in consumption. When petroleum dispatch sergeants prepare the graphs for each type of product, they use FM 10-67-1 as a guide. The following should be shown on the consumption graph:

    - Storage capacity for product in thousands of barrels.
    - Five percent of total storage capacity at the top of the graph as an allowance for vapor space.
    - Safety level at the bottom of the graph based on theater policy.
    - Calculated issues and receipts.
    - Projected tank cleaning and repairs.

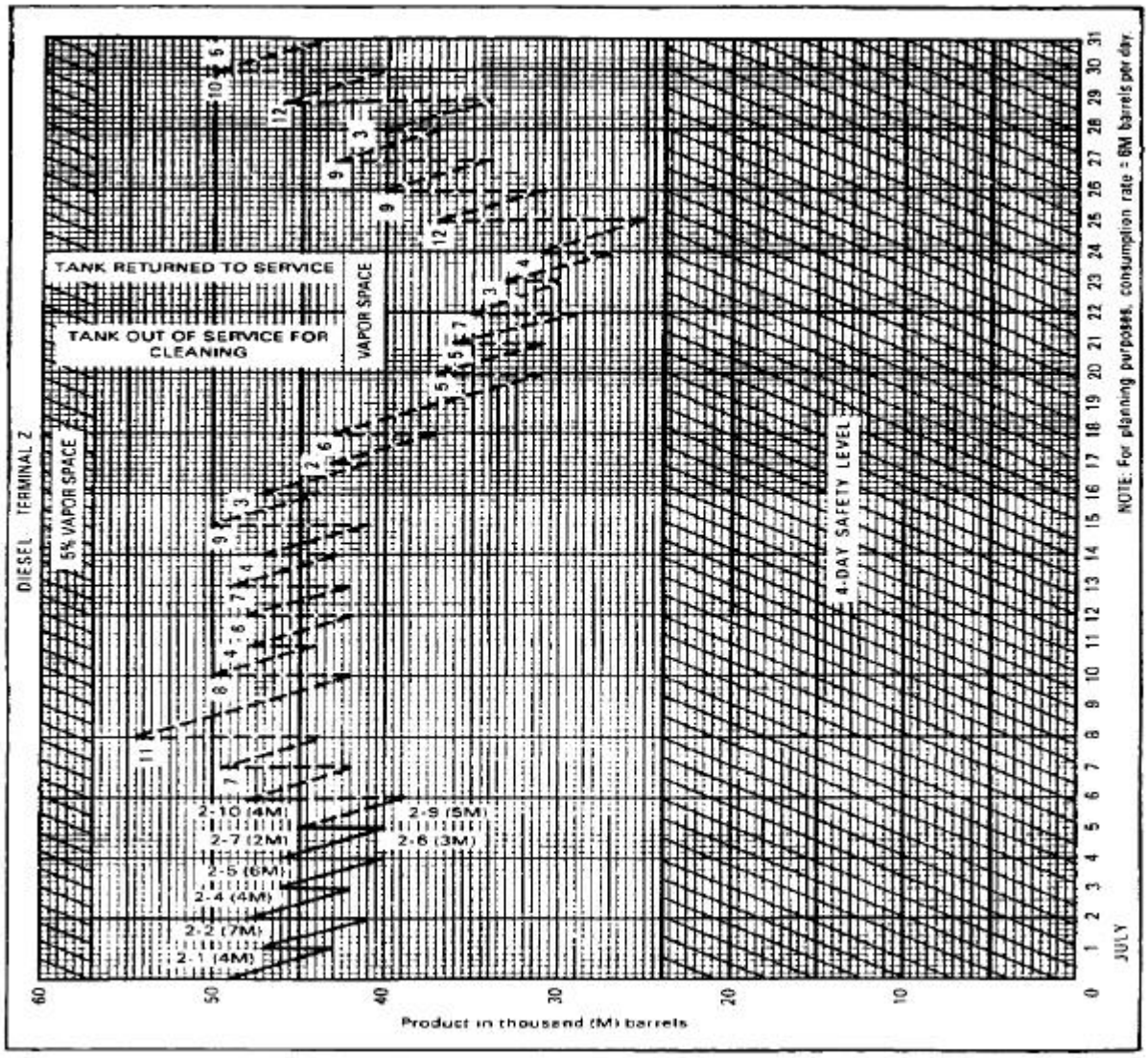

Figure 4-2. Consumption graph

- Monthly pipeline schedule. Petroleum dispatch sergeants use FM 10-67-1 as a guide for preparing schedules. They need to know what products are required for the 30-day period. Also, they must determine the time it will take the product to reach its destination. Then they prepare the schedule--actually a graph that shows the line capacity in barrels plotted against time in hours.
- Daily pumping schedules. Petroleum dispatch sergeants prepare the daily pumping schedules as a guide for dispatch operations (Figure 4-3)**.** Daily schedules are usually prepared a week in advance so the graphic progress chart and the daily pumping orders can be prepared. These schedules show the monthly requirements broken down into the daily dispatches along with the emergency requirements and any changes.

Date: 5 July xx (Continued from 4 July)							
		Terminal X		Terminal Y		Terminal Z	
Time	Description	In	Out	In	Out	In	Out
0001	RE MOGAS FE JP-4		500				
0200	RE JP-4 FE MOGAS					500	
0400	RE JP-4 FE MOGAS		500				
	RE MOGAS FE JP-4			250			
0800	RE JP-4 FE MOGAS			250		250	
1200	RE MOGAS FE diesel		500				
	RE MOGAS FE JP-4					250	
1500	RE diesel FE MOGAS		500				
1600	RE JP-4 FE MOGAS					500	
	RE MOGAS FE diesel			Check time of passing			
1800	RE MOGAS FE JP-4		500				
1900	FE MOGAS RE diesel			500		Shut down	
2200	RE MOGAS FE JP-4			250		250	
2400	RE JP-4 FE MOGAS		500				
	RE MOGAS FE diesel					250	

Figure 4-3. Daily pumping schedule

- Daily pumping orders. Petroleum dispatch sergeants use FM 10-67-1 or SOP for the format for the daily pumping order. General guidelines are as follows:

  - Show time in chronological sequence--for example, 0001 through 2400.
  - Give definite times for specific actions.
  - Show each terminal, intermediate terminal, and any pump stations.
  - Give specific orders for each terminal or station in clear, concise language.
  - State all product and batch number.
  - Give amount of product to be handled and type of interface cuts.

Batching the Product

Since MOGAS, AVGAS, diesel, and JP-8 must be pumped through a pipeline, the chief dispatcher at battalion headquarters schedules the products in a pumping order. This scheduling is known as "batching." Most of the time, a buffer product (usually MOGAS) is pumped between the different products to separate them. The buffer is different in quality or gravity from the product it is following; the part that mixes with the product is called the "interface." When a buffer is not used, the area of commingling is also called the interface. The interface is drawn off and disposed of according to instructions from the quality surveillance officer. When the interface is mixed with another product to improve or downgrade it, the action is called "blending." If the company is operating as a separate company, the dispatcher of the petroleum products section is responsible for batching. He should use FM 10-67-1 for detailed instructions on:

- Batching procedures.
- Control of interface.
- Determining deterioration limits of the interface product. (Also see MIL-HDBK-200.)
- Switching procedures.
- Delivery procedures, including reporting (at 1-minute intervals) change of color or gravity.
- Making cuts.

NOTE
A batch interface detector, NSN 6680-01-035-5553 (LIN G03783), is a CTA item. An engineer unit installs it.

Section IV. Maintenance Section

MISSION

The maintenance section's mission is to maintain all fixed facilities, vehicles, power generators, and other equipment assigned to the company. The chief of the maintenance section makes decisions on the following:

- Building (built by engineer units for the pipeline complex and turned over to the petroleum pipeline and terminal operating company for upkeep).
- Fire and water systems.
- Roads and railroad sidings.
- Soil erosion and camouflage growth.
- Weed and grass control.

PERSONNEL

Your most valuable resources are your personnel. To employ them effectively, you must understand their duties. The maintenance section personnel and their duties are discussed below.

Unit Maintenance Technician (915A, W2). Plans, supervises, and directs the unit maintenance of all organic equipment of the petroleum pipeline company. Keeps the commander and staff members advised of the maintenance material readiness situation.

Motor Sergeant (63B50, E7). Assists the unit maintenance technician in the supervision of all maintenance functions. Directly responsible for the supervision of motor maintenance and supporting personnel. Applies

production and quality control principles and procedures to maintenance operations. Prepares informal daily work assignment sheet, listing priorities, tasks, mechanics, area cleanup responsibilities, and special requirements for such items as tools, parts, and lubricants. Monitors use of hand and power tools. Responsible for security of tools. Conducts informal spot check inspections. Enforces safety and environmental compliance procedures. Supervises recovery operations. Performs administrative duties.

Senior Mechanic (63B30, E6). Performs light-wheel vehicle mechanic duties, performs heavy-wheel vehicle mechanic duties, supervises lower ranking soldiers, and provides technical guidance to the soldiers of the maintenance section to do their duties. Supervises unit maintenance on wheel vehicles, MHE, power generation equipment, and upkeep of hand and power tools. Performs BDAR. Supervises recovery operations.

Construction Equipment Repairer, (62B20, E5 and 62B10, E3). Performs unit maintenance on construction equipment (crane and bulldozer), air compressors, and pneumatic tools. Inspects traction suspension, booms, and blades. Inspects clutches and brakes for wear, alignment, and slippage. Replaces starters, generators/ alternators, spark plugs, carburetors, fuel pumps, radiators, fans, hoses, and belts. If needed, serve as a welder. E5 supervises lower grade soldiers and provides technical guidance to soldiers to do their mission. E3 also serves as a light-wheeled vehicle driver.

Light Wheel Vehicle Mechanic, (63B20, E5; 63B10, E4 and two E3s). Performs unit maintenance of the company's organic vehicles and equipment. Maintains power-assisted brake systems, wheeled vehicle suspension systems, wheel/hub assemblies, mechanical and hydraulic steering systems, and wheeled vehicle crane/hoist/winch assemblies. Records maintenance on DA Form 2402. Maintains tools and test equipment. The E5 also supervises lower grade soldiers and provides technical guidance to do their duties. The E3 light-wheel vehicle mechanics also drive the 5-ton cargo truck when required.

QM & Chem Equipment Repairer, (63J20, two E5s; 63J10, two E4s and two E3s). Performs unit maintenance on QM equipment, including FSSP elements (350-GPM pumps, filter/separators), tank and pump unit, field ranges, immersion heaters, space heaters, and tents. Disassembles, inspects, and replaces equipment components. Lubricates equipment. Records maintenance on DA Form 2402. Maintains tools and test equipment. The E5 also supervises lower grade soldiers and provides technical guidance to do their duties.

Welder, (44B10, E4). Operates and performs preventive maintenance on the welder's tool kit and cutting and welding torch outfit.

Power Generator Equipment Repairer, (52D20, E5 and 52D10, E3). Performs unit maintenance on company generators.

Heavy-Wheel Vehicle Mechanic, (63S20, E5 and 63S10, E4). Performs unit maintenance on heavy-wheel vehicles (prime movers designated as more than 5 tons and their associated trailers) and MHE.

Recovery Vehicle Operator, (63S1H8, E4). Operates the 5-ton wrecker used to recover disabled organic vehicles and equipment. Also operates radio when required.

Equipment Records & Parts Specialist, (92A10, E4 and E3). Assists the unit maintenance technician in maintaining the equipment maintenance records and schedules for organic vehicles and equipment as required by TAMMS. Maintains stock locator system and administers document control procedures. Performs PLL and SSL duties in manual and automated supply applications. Requests, receives, and stores all repair parts and reference publications to support mechanics performing unit maintenance. Prepares maintenance reports and schedules vehicles for maintenance. Performs dispatching procedures using manual and automated systems. Also serves as radio operator and drives light vehicle when required.

EQUIPMENT

Table 4-4 lists the equipment prescribed by TOE 10417L for the maintenance section. It is needed for completion of the mission.

Table 4-4. TOE equipment list for the maintenance section

ITEM	QUANTITY
Analyzer set engine: Portable solid state	1
Anvil blacksmiths: Cast iron body 2000-lb, 16 1/4 L x 4-1/2-in W	1
Cable telephone: WD-1/TT DR-8 1/2-km	2
Charger battery: PP-34/MSM	1
Cleaner steam pressure jet:	1
Comp unit RCP: Air rec gas drvn 5-CFM 175-PSI	1
Comp unit RCP: Trk 2-whl pneu tires gas-drvn 5-CFM 175-PSI	1
Generator set: Ded skid-mounted, 5-kw 60-hz	2
Installation kit: MK-2502/VRC F/AN/VRC-46/64 or AN/GRC-160	1
Heater duct type PTBL: Gas 250,000-BTU whl-mtd	2
Hose assembly: nonmetallic, fuel/oil hydrocarbon	8
Jack dolly type, hydraulic: 10-ton capacity	1
Installation kit: MK-1443/VRC-46 for VRC-46	1
Light set general illumination: 25-outlet	1
Lubricat-serv unit, power-operated: trailer-mounted, 15-CFM air comp, gas-driven	1
Multimeter, digital: AN/PSM-45	1
Pneumatic tool and compressor outfit: 250-CFM trlr-mtd	1
Radio set: AN/VRC-46	2
Reeling machine, cable hand: RL-39	1
Shop equip contact maint trk-mtd	1
Truck utility: cargo/troop carrier 1 1/4-ton, 4X4 , with equipment (HMMWV)	1
Truck wrecker: 5-ton, 6x6, with winch, with equipment	1
Telephone set: TA-312/PT	2
Tent: frame type, maintenance, medium, light metal cotton duck OD	2
Shop equipment auto maint and repair: OM common no 1 less power	1
Shop equipment auto maint and repair: org supply no 1 less power	1
Tool kit, general mechanics: automotive	19
Trailer cargo: 3/4-ton, 2-wheel, with equipment	1
Vise machine table: screw-type	1
Welding shop trailer-mounted	1
Trailer cargo: 1 1/2-ton, 2-wheel, with equipment	1
Truck cargo: 4x4 LMTV with equipment with winch	1

OPERATIONS

With personnel performing maintenance at distance sites as well as the maintenance area, efficient scheduling is crucial. The motor sergeant may need to reschedule maintenance services to enable mechanics to repair malfunctions reported by equipment operators on DA Form 2404. The motor sergeant must schedule maintenance to keep personnel working at or near capacity. To do so, he needs to know maintenance personnel duties, equipment capabilities, and typical repair times. The sergeant must schedule the sequence of repairs around the availability of parts. This means understanding the repairer parts request system and request times.

Setup and Closedown

Site setup and closedown are important and complicated. Field situations seldom allow you to operate under ideal conditions. However, the area selected for maintenance should be centrally located, be on or near a good road, provide concealment, be easy to secure, and be relatively hard and well drained.

- Setup. See FM 55-30 for information on setting up a tactical motor pool. To set up the maintenance element in the field, you need to develop a layout plan, pitch tents, position equipment in the tents, and organize for maintenance operations and repair parts issue.

- Closedown. When the unit has to move, the commander will issue a warning order telling you when to close down and prepare to move. As you plan for the move you should evaluate the following:

  - By what date must the unit be ready to move?
  - What types of operations are expected?
  - How many soldiers will move to the new area?
  - Will some soldiers continue to operate at the old area?
  - When will equipment be deployed?
  - Is special maintenance required for equipment before or on arrival in the new area?
  - Will advance elements require any special maintenance support?
  - What are climate and terrain like in the new area?
  - Environmental/safety concerns?

Unit Maintenance

Make sure that your soldiers do not perform maintenance beyond their capabilities. Deficiencies discovered before, during, and after operation which are beyond the operator's capability become the responsibility of unit mechanics. Your mechanics perform maintenance services on equipment and repair items sent to them. When they cannot repair items, they send them to DS maintenance. Make sure the mechanics use technical manuals for the equipment in performing quarterly maintenance services and troubleshooting. The mechanics also use DA Form 2404, just as the operator does, to note any defects they find. If the mechanics cannot correct the defects and must send them to DS maintenance, they note that on the form. Once the DS maintenance activity completes the work, DA Form 2407 or DA Form 5504 showing the hours of labor, parts, and other materials used, and cost of repairs is sent back to the unit.

Repair Parts

Your section is authorized a PLL to support daily maintenance operations. Usually, this is for a specific number of days supply based on the average customer wait time. The unit commander approves the PLL. You supervise the PLL clerk and make sure the list is set up and maintained according to DA Pamphlet 710-2-1 (TMs in the 38-L32 series if your unit is automated).

Mandatory parts list. Consolidated MPLs list the repair parts you must have for use on combat-essential equipment. The unit commander should check to make sure there is an MPL for each on-hand end item identified in the Mission Profile Development List for his unit. Request more MPLs according to DA Pamphlet 710-2-1. The commander should also check the mandatory stockage quantity and update the PLL records according to DA Pamphlet 710-2-1.

Repair parts requests. The PLL clerk makes requests for parts. To ensure requests are submitted in a timely manner, find out the average maximum lead time for items requested. Make daily requests SOP to prevent an accumulation of requests and to help ensure continuous supply. Specify procedures for setting up PLL levels, for using priority designators, for requesting follow-ups, and for reporting delays.

Tool Maintenance and Accountability

Set up an effective tool control system and inventory tools regularly. Account for and replace lost, damaged, or destroyed tools according to AR 735-5. See TM 9-243 for details on tool use and care. DA Pamphlet 710-2-1 has toolroom procedures. You are authorized a set of common tools and equipment. The set is usually mounted on a secured vehicle. One side of the vehicle can be used for storing tools and test equipment, and the other side can be used to store key repair parts. This setup will help your soldiers find the tools they need quickly and will speed on-site repair. Assign a tool keeper to maintain a tool sign-out register. Make sure the equipment is returned at the close of each working day. Issue an automotive tool kit on a hand receipt to each mechanic. Each mechanic is responsible for ensuring that assigned tools are properly maintained and stored when not in use. Set up a secure tool storage area.

The Army Maintenance Management System

TAMMS is the key to good maintenance management. TAMMS records give your commander the data needed to manage equipment resources. These records enable him to evaluate modification work orders, repair parts requirements, material readiness, and support requirements. They help him evaluate equipment operation, including availability, deficiencies, and failure frequency. DA Pamphlet 738-750 contains specific instructions on the preparation and use of the maintenance system forms. The three types of records are operational, maintenance, and historical. Operational records are used to control operators and equipment, plan for maintenance operations, and make best use of equipment. Maintenance records control maintenance scheduling, inspection procedures, and repair work loads. They also provide a uniform method for recording corrective actions. They are used to determine equipment readiness and reliability and to determine use and logistical requirements. Historical records document permanently the receipt, operation, maintenance, and disposal of equipment.

Unit Level Logistics System-Ground

ULLS-G provides supervisory control and flexibility to maintenance operations. ULLS expedites repair parts supply and maintenance functions at the lowest level. ULLS also communicates with other systems by magnetic media (diskette) transfer or telecommunications. Also, incorporated into ULLS is the AMSS, which replaces the manual reporting requirements in AR 700-138, Army Logistics Readiness and Sustainability. ULLS performs many jobs for your unit with little input from the operator. When your clerk orders repair parts, ULLS edits the request, updates the document control register, and provides information to update deadline. ULLS edits transactions using an internal catalog and information provided in the equipment data file. When your clerk issues a part from the PLL, ULLS makes, computes, and generates a replenishment requisition. ULLS is divided into three major areas: Class IX supply, maintenance, and utilities or files maintenance. ULLS supply data are sent to the supply support activity at the DSU level. The data are then forwarded to the DS4 level. ULLS speeds up supply and maintenance operations at the unit level while eliminating errors that could occur under a manual operation. It allows supervisory control of the system with passwords, user identification codes, and the commanders exception report. In case of emergency, when ULLS is not available or operative, your unit may use manual procedures. For procedures and frequency of ULLS application see Table 4-5.

Table 4-5. Operator/supervisor working matrix.

PROCEDURE	DAILY	WEEKLY	MONTHLY
Dispatch vehicles	X		
Process received/installed parts	X		
Requisition parts	X		
1. Review AMSS reports	X		
2. Verify information (NSN, part number)	X		
3. Check PLL	X		
4. Enter part data	X		
5. Run commanders exception report	X		
6. Process requisitions through OSC	X		
7. Review OSC transactions	X		
8. Turn in maintenance/supply diskette	X		
9. Process maintenance/supply status	X		
Review NMC report and maintenance request register	X		
Review next day dispatch requests	X		
Back up data files	X		
Provide commander with with NMC report and maintenance request register		X	
Run zero balance report (verify req status)		X	
Review document control register (update)		X	
Provide commander AMSS reports		X	
Review excess management report and process excess for turn in		X	
Update Class IX catalog			X
Review PLL inventory report and inventory			X
Review demand analysis report and make required changes			X
Provide commander service scheduled listing			X

Dispatch

Dispatch procedures apply to vehicles, generators, forklifts, and engineer equipment. They also apply to other items the commander may designate.

Before mission. The operator contacts the dispatcher with a vehicle requirement. A vehicle is designated. The operator performs a before-operation check using the appropriate technical manual and DA Form 2404. If he finds any deficiencies, they are either corrected or another vehicle is designated. The operator documents the discrepancies on DA Form 2404. The dispatcher uses DA Form 2401 and DA Form 1970 to dispatch the vehicle to the operator.

During Mission. The operator performs during-operation checks. Make sure the operator knows that any maintenance problems found during these checks should be reported at once, if possible, and recorded on performance records for the equipment.

After Mission. The operator tops off the fuel, performs after-operation checks, and makes appropriate entries on the DA Form 2404. The operator then returns the DA Form 2404 and DD Form 1970 to the dispatcher. The dispatcher reviews the entries and posts the mileage or hours. He then enters the time of return to close out the DA Form 2401 entry for that item.

Recovery and Evacuation

It may become necessary to recover equipment which becomes disabled in a location away from the motor pool. If your soldiers are unable to repair disabled equipment, arrange to evacuate it, and have it serviced elsewhere.

Recovery. To prepare for recovery, consult technical manuals for the weight of the item and for other necessary data. Reconnoiter the area to determine the best method of anchoring the wrecker. FM 20-22 discusses various types of ground anchors, equipment needed, safety precautions, and records for computing equipment capacities. FM 21-305 provides each vehicle driver with vehicle recovery and field expedient information. Each of your drivers should have a copy of FM 21-305. Use the maintenance SOP to standardize signals between wrecker and winch operators. If an item is so contaminated that it cannot be recovered, contact the higher headquarters for advice and assistance.

Evacuation. If a unit cannot recover an equipment item, notify the supporting maintenance activity and request evacuation. Tell the maintenance activity the type of equipment and its location. If the situation allows, a crew member should remain with the equipment until it is picked up by the supporting activity.